

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-8 (Canceled).

Claim 9 (Currently Amended): ~~[[An]]~~ A wide-band amplifier comprising:

an input terminal configured to receive an input voltage;

an output terminal configured to provide an amplified output voltage;

an amplification device connected in series between the input terminal and the output terminal, ~~an output terminal of the amplification device being directly connected to the output terminal~~ ~~an output terminal of the amplifier, a load to the amplifier being directly coupled to the amplification device;~~

an LC parallel resonant circuit connected between the output terminal and a ground terminal in parallel to the amplification device; and

an LCR series resonant circuit connected between the output terminal and the ground terminal in parallel to the amplification device and the LC parallel resonant circuit.

Claim 10 (Previously Presented): An amplifier according to claim 9, wherein a common-gate circuit and a cascade circuit are combined.

Claim 11 (Previously Presented): An amplifier according to claim 9, wherein a common-source circuit, a cascade circuit, and a voltage feedback circuit are combined.

Claim 12 (Currently Amended): A wireless communication apparatus comprising:

an antenna;

a band-pass filter;

a low noise amplifier configured to amplify a voltage of a received signal, the low noise amplifier [[and]] including

an input terminal configured to receive the received signal;

an output terminal configured to provide an amplified signal;

an amplification device connected in series between the input terminal and the output terminal, an output ~~terminal~~ of the amplification device being directly connected to the [[an]] output terminal of the low noise amplifier,

an LC parallel resonant circuit connected between the output terminal and a ground terminal in parallel to the amplification device, and

an LCR series resonant circuit connected between the output terminal and the ground terminal in parallel to the amplification device and the LC parallel resonant circuit;

a down-converter connected to the output terminal of the low noise amplifier and configured to down-convert the ~~voltage-amplified-received~~ amplified signal provided by the output terminal by frequency conversion, ~~the down-converter being directly coupled to the amplification device;~~

an automatic gain controller;

an analog-digital converter; and

a signal processing circuit configured to perform digital signal processing of received data.

Claim 13 (Currently Amended): A wireless communication apparatus comprising:

an antenna;

a band-pass filter;

a low noise amplifier configured to amplify a voltage of a received signal, the low noise amplified [[and]] including

an input terminal configured to receive the received signal;

an output terminal configured to provide an amplified signal;

an amplification device connected in series between the input terminal and the output terminal, ~~and output of the amplification device being an output of the low noise amplifier,~~

an LC parallel resonant circuit connected between the output terminal and a ground terminal in parallel to the amplification device, and

an LCR series resonant circuit connected between the output terminal and the ground terminal in parallel to the amplification device and the LC parallel resonant circuit;

a down-converter connected to the output terminal of the low noise amplifier and configured to down-convert the amplified voltage ~~amplified received signal provided by the output terminal~~ by frequency conversion;

an automatic gain controller;

an analog-digital converter;

a digital-analog converter configured to convert transmit data to an analog signal, the down-converter being directly coupled to the amplification device;

an up-converter configured to up-convert the analog transmit signal by frequency conversion;

a power amplifier configured to amplify a power of the up-converted transmit signal;  
and

a signal processing circuit configured to perform digital signal processing of transmit/receive data.

Claim 14 (Currently Amended): A wide-band [[An]] amplifier comprising:  
an input terminal configured to receive an input voltage;  
an output terminal configured to provide an output voltage;  
an amplification device connected in series between the input terminal and the output  
terminal,~~an output terminal of the amplification device being an output terminal of the~~  
~~amplifier, a load to the amplifier being directly coupled to the amplification device; and~~  
an analog band-pass filter connected between the output terminal and a ground  
terminal in parallel to the ~~output terminal of the~~ amplification device, the analog band-pass  
filter having a plurality of poles provided on a left side of an s-plane and a plurality of zeros  
arranged between the poles, at least two zeros being arranged at locations other than an origin  
of the s-plane.

Claim 15 (Previously Presented): An amplifier according to claim 14, wherein the  
band-pass filter does not have a capacitor provided in series with an output terminal of the  
amplifier.

Claim 16 (Previously Presented): An amplifier according to claim 14, wherein an  
inductance and a capacitor are not provided in series between an output terminal of the  
amplification device and an output terminal of the amplifier.

Claim 17 (Previously Presented): An amplifier according to claim 14, wherein a  
common-gate circuit and a cascade circuit are combined.

Claim 18 (Previously Presented): An amplifier according to claim 14, wherein a common-source circuit, a cascade circuit, and a voltage feedback circuit are combined.

Claim 19 (Currently Amended): A wireless communication apparatus comprising:  
an antenna;  
a band-pass filter;  
a low noise amplifier configured to amplify a voltage of a received signal, the low noise amplifier [[and]] including

an input terminal to receive the received signal;

an output terminal to provide an amplified signal;

an amplification device connected in series between the input terminal and the output terminal, ~~an output terminal of the amplification device being an output terminal of the low noise amplifier~~, and

an analog band-pass filter connected between the output terminal and a ground terminal in parallel to the output terminal of the amplification device, the analog band-pass filter having a plurality of poles provided on a left side of an s-plane and a plurality of zeros arranged between the poles, at least two zeros being arranged at locations other than an origin of the s-plane;

a down-converter connected to the output terminal and configured to down-convert the amplified voltage ~~amplified received signal~~ provided by the output terminal by frequency conversion, ~~the down-converter being directly coupled to the amplification device~~;

an automatic gain controller;

an analog-digital converter; and

a signal processing circuit configured to perform digital signal processing of received data.

Claim 20 (Currently Amended): A wireless communication apparatus comprising:

- an antenna;
- a band-pass filter;
- a low noise amplifier configured to amplify a voltage of a received signal, the low noise amplifier [[and]] including
  - an input terminal configured to receive the received signal;
  - an output terminal configured to provide an amplified signal;
  - an amplification device connected in series between the input terminal and the output terminal, ~~an output terminal of the amplification device being an output terminal of the low noise amplifier~~ and
    - an analog band-pass filter connected between the output terminal and a ground terminal in parallel to the output terminal of the amplification device, the analog band-pass filter having a plurality of poles provided on a left side of an s-plane and a plurality of zeros arranged between the poles, at least two zeros being arranged at locations other than an origin of the s-plane;
    - a down-converter connected to the output terminal and configured to down-convert ~~the voltage-amplified received~~ amplified signal by frequency conversion, ~~the down-converter being directly coupled to the amplification device;~~
  - an automatic gain controller;
  - an analog-digital converter;
  - a digital-analog converter configured to convert transmit data to an analog signal;
  - an up-converter configured to up-convert the analog transmit signal by frequency conversion;

a power amplifier configured to amplify a power of the up-converted transmit signal;  
and  
a signal processing circuit configured to perform digital signal processing of  
transmit/receive data.